10/28/2004

Daily and Weekly Instrument Check Categories and Criteria

Flags	Criteria	Daily	Weekly
Low Battery	Average Cimel battery - flag if < 5 volts, do not include voltages < 4 volts and > 6 volts.	**X**	**X**
	Average DCP battery - flag if < 11 volts, do not include voltages < 9 volts and > 15 volts	**X**	**X**
	Average external CIMEL battery - flag if < 11.5 volts, do not include voltages < 9 volts and > 15 volts.	**X**	**X**
Negative Battery Trend	Include battery voltage trends for all 3 batteries: flag if trend exceeds -0.2V/week	**X**	**X**
Dark Current	Flag if > 35 counts in any channel for sky channels or new instruments (all channels) or if >10 counts for sun data (old Cimels); and more than twice per/day.	**X**	**X**
Robot Errors	Flag if >**35**; or >**5** any day during week	**X**	**X**
Filter Wheel Errors	Flag if >**35**; or >**5** any day during week	**X**	**X**
Cimel Clock Shift	Flag if > 1 minute, list the date when it happened for the last time	**X**	**X**
DCP Clock Shift	Flag if in RED if >10 seconds and give the time difference from reference in the latest transmission	**X**	**X**
Missing Messages	Flag any missing messages in the last 24 hours (the last 24 hours may be when the instrument last transmitted continuous data, not necessarily from current time)	**X**	**X**
Parity Errors	Check for one parity error in message and then flag the message. Flag if >2 messages per day (GOES) or >4 messages per day (METEOSAT/GMS)	**X**	**X**
Temperature Jumps	Flag if temperature change is >12C in 15 minutes or less when this condition occurs more than **7** times		**X**
	Flag if temperature change is >12C in 15 minutes or less when this condition occurs more than **2** times	**X**	
Bad Temperature	Flag if Temperature >55C and below -30C when this condition occurs more than **7** times		**X**
	Flag if Temperature >55C and below -30C when this condition occurs more than **2** times	**X**	
Constant Humidity Status	Flag if at least 4 days during a week only humidity statuses are reported from early morning till m=2.5.		**X**
	Flag if humidity statuses are reported from early morning till m=2.5.	**X**	

Bad Sun Tracking	Flag if <**10** good triplets		**X**
	Flag if <**2** good triplets	**X**	
A/K Too Low	Flag voltage values < 0.3	**X**	**X**
Incomplete Almucantars	Flag if more than 20% of almucantars are incomplete (possible MAX bytes problem)	**X**	**X**
A/K Discrepancy	Estimate A#K from PP and almucantars measurements when Level 1.5 AOT data are available. Do not flag if at least in 2 instances for 440nm channel of A are within **10**% from K.	**X**	**X**
Asymmetric Almucantars	Check almucantar from -6 degrees to 0 and 0 to +6 degrees. Flag if increasing in both ranges or decreasing in both ranges.	**X**	**X**
Header Only	If instrument sends only Cimel headers for the entire week	**X**	**X**
Diurnal Dependence Flag	Check all good level 1.5 days (80% of all solar measurements are processed to level 1.5, and there are at least 25 of them). For the first half of the day, run regression of AOT vs 1/m (m is air mass) for all channels and find minimal slope for all good days. Flag if minimum slope is greater than 0.1, which means a constant diurnal dependence which could be a result of something in the collimator.	**X**	**X**
InGaAs vs Si Detectors	Level 1.5 AOT data from 1020nm are compared within 1.5 hours from solar noon. Flag if average difference is more than 0.3 and there are at least 10 measurements.	**X**	**X**